

Memorandum



FOR ALL INTERNAL COMPANY CORRESPONDENCE

DATE August 26 1964
TO Those Listed
FROM C. T. Smith
SUBJECT Keyboard Standards
DEMA - Sub committee Meeting. 8/19/64

1120 630

CTD#60

1. Two keyboards were presented for later examination and evaluation
(See #8 for details).
2. The "scope" of the subcommittee will be, "to recommend an arrangement
(or arrangements) for keyboards used in general interchange of
information."
3. A Task group was created to recommend a keyboard for use with the
ASCII. (See #7 for details)
4. Thursday, October 8, 1964 is the date set for the next meeting of the
subcommittee.
5. Tuesday, September 15, 1964 is the date set for the next meeting of the
Task group.
6. The meetings of #4 and #5 will be held at 10:00 A.M. in the DEMA
Headquarters at 235 E 42nd St., N.Y.
7. Members of the Task group are:

J.P. Arizona

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C.T. Smith

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John Booth

H.C. Unstead

F.E. Lauder

P.F. Stanley

W.F. Huff

A.J. Smith

IBM

Remington Rand

Burroughs

National Cash Register

Honeywell

Pitney-Bowes

Teletype -- Chairman

USAEI

RCA

Royal McFee

USM

Fairchild Graphic Equipment

To be announced

B1 67/2/17

An informal meeting was held after the subcommittee adjourned.

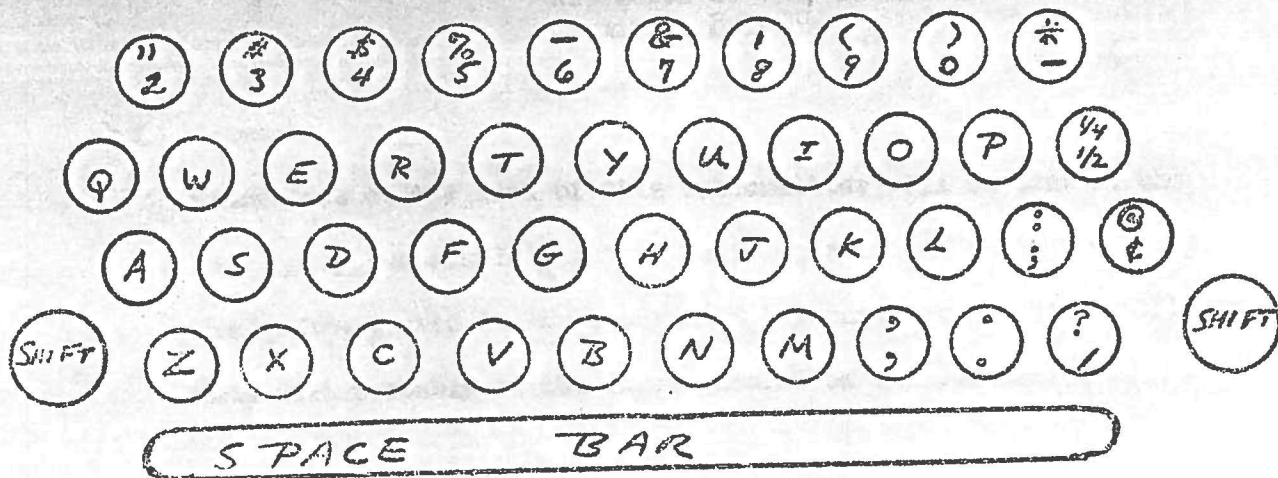
The first formal meeting will be held 9/15/64

8. The two keyboards presented were:

a. BEMA X4A1E - typewriter standards

1 Manual typewriter keyboard.

Figure 1



2. Electric typewriter keyboard.

This is the same as 1. except for the following differences:

Manual	Electric
" 2	@ 2
- 6	\$ 6
' 8	# 8
* -	=
@ \$	" '

b. Mil standard 188D - Revised

Note that this "standard" was presented for discussion only.

9. List of Documents submitted to subcommittee:

<u>Document No</u>	<u>Subject or Title</u>
1	Revised ASCII recommended by X3.3.2.4 to X3.2
2	Keyboard - Mil Standard 188-B 2/24/64
3	Keyboard - Mil Standard 188-B Revised
4	Changes to Mil Standard 188-B
5	Attendees at initial meeting of OMB X4-A9 Committee 8/19/64

10. Comments

Since most of the work of this subcommittee will be done in the Task group, we should maintain active participation in the group. The greatest need is for a standard keyboard for use with ASCII and this will probably be the first product of the subcommittee.


C. T. Smith

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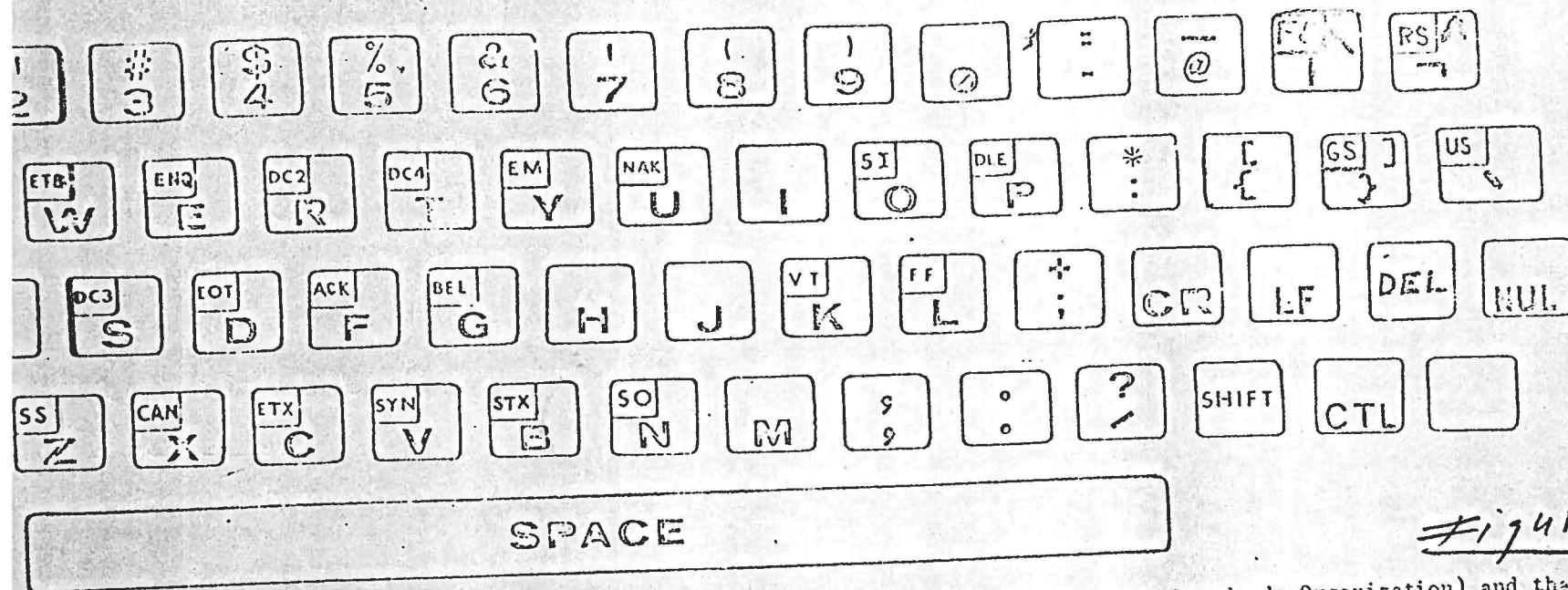


Figure 2

ternational Standards Organization) recommended changes will be approved by ASA(American Standards Organization) and that ASA
ational Choice) positions will also be approved by ASA.
END

(16 characters)
(1st 15 characters)
(1st character of 111 on separate key)
(1st character of 101 in lower case)
(1st 12 characters)
(14th and 16th characters)
(13th and 15th characters on special keys)
(13th and 15th characters duplicated in upper and lower case)
(16 characters)
(1st 15 characters)
(last character)

OPERATING LEGEND

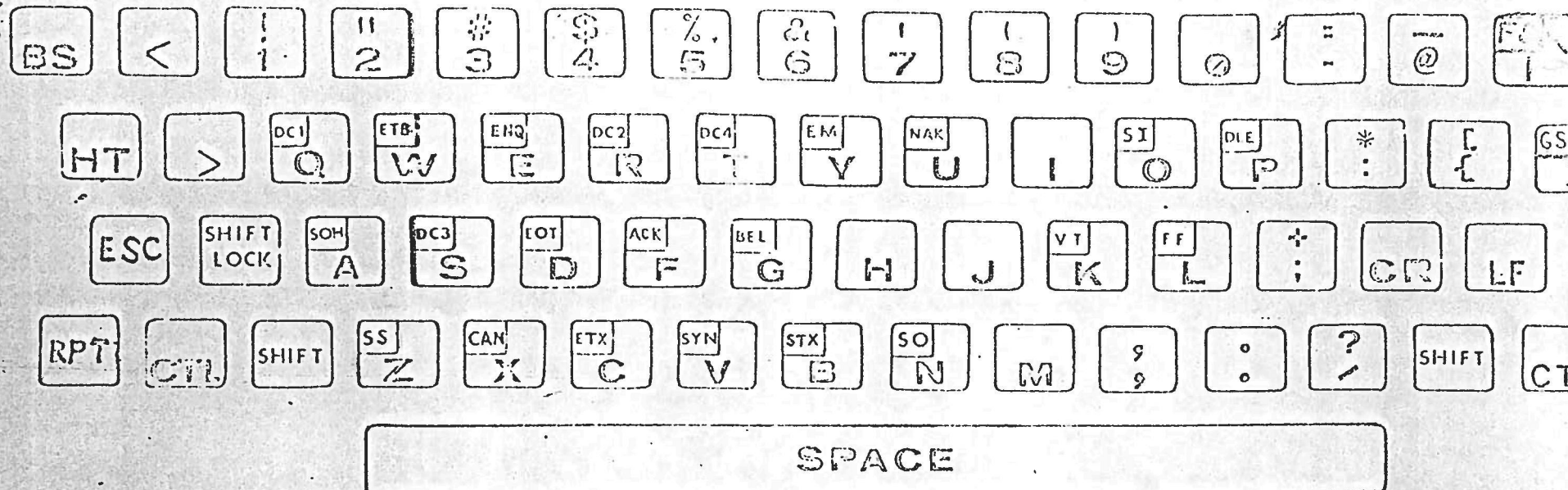
1. Shift produces upper character on the key top(not within the small square) or upper case of a letter.
2. Unshift produces lower character on the key top or lower case of a letter.
3. Control (CTL) produces the character within the small square on the key top.

*ISO proposed changes and ASA proposed additions in NC(National Choice positions given in Figure 1B which follows.

Figure 1. Four row keyboard

MIL-STD-188B 24 February 1964
REVISED

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* Assumption: That ISO(International Standards Organization) recommended changes will be approved by ASA(American Standards Organization) recommendations for NC(National Choice) positions will also be approved by ASA.

LOGIC LEGEND

Key	Bits	Bits
	765	765
Shift	110	100(16 characters)
	111	101(1st 15 characters) (last character of 111 on separate key) (last character of 101 in lower case)
	011	010(1st 12 characters)
	010	011(14th and 16th characters)
	011	13th and 15th characters on special keys)
	010	010(13th and 15th characters duplicated in upper and lower case)
Control	110	000(16 characters)
	111	001(1st 15 characters)
	101	001(last character)

OPERATING LEGEND

1. Shift produces upper character on the key (small square) or upper case of a letter.
2. Unshift produces lower character on the key (large square) or lower case of a letter.
3. Control (CTL) produces the character with the character on the key top.

*ISO proposed changes and ASA proposed additions are given in Figure 1B which follows.

Figure 1. Four row keyboard

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